

IN THE CLAIMS

1. (currently amended) A method of fabricating a cellular cushion, said method comprising:

injecting material into a mold in an injection molding process to form a cushion first layer that is formed integrally with a plurality of hollow cells that extend outward from the first layer, such that each of the plurality of cells extends only from a root defined at the first layer to a tip, and such that the plurality of cells extending from the first layer are coupled together in flow communication via a plurality of channels aligned substantially within the same plane;

coupling a second layer to the first layer; and

coupling an injection stem in flow communication to the plurality of hollow cells to enable an operating pressure within only the plurality of hollow cells extending from the same layer to be changed.

2. (previously presented) A method in accordance with Claim 1 wherein injecting material into a mold in an injection molding process further comprises injection molding material into a mold such that the plurality of hollow cells formed are each defined by a wall having a substantially constant thickness across the first layer.

3. (original) A method in accordance with Claim 1 wherein injecting material into a mold in an injection molding process further comprises forming a plurality of cells that are each adapted to expand outwardly towards each other when an operating pressure within the cells is increased.

4. (original) A method in accordance with Claim 1 further comprising coupling a third layer to at least one of the first layer and the second layer wherein at least one of the second layer and the first layer includes a plurality of fluid control devices that are coupled together in flow communication, and wherein each fluid control device is positioned between adjacent hollow cells for selectively controlling flow communication independently to each of the plurality of hollow cells.

5. (original) A method in accordance with Claim 4 wherein coupling a third layer to at least one of the first layer and the second layer further comprises coupling the third layer to the first layer such that the first layer is between the second and third layers.

6. (original) A method in accordance with Claim 4 wherein coupling a third layer to at least one of the first layer and the second layer further comprises coupling the third layer to the second layer such that the second layer is between the first and third layers.

7. (original) A method in accordance with Claim 4 wherein coupling a third layer to at least one of the first layer and the second layer further comprises:

inserting the plurality of hollow cells through a plurality of openings formed within the third layer, such that each respective hollow cell extends through a respective third layer opening; and

coupling the third layer to the first layer such that the first layer is between the second and third layers.

8. (original) A method in accordance with Claim 4 further comprising coupling an inflation stem in flow communication with the plurality of fluid control devices to enable an operating pressure within the plurality of fluid control devices to be changed.

9. (original) A method in accordance with Claim 1 wherein coupling a second layer to the first layer further comprises coupling the second layer to the first layer using at least one of an RF welding process, a lamination process, and an adhesive process.

10. (withdrawn) A method in accordance with Claim 1 wherein injecting material into a mold in an injection molding process further comprises injecting an elastomer material into a mold to form the cellular cushion.

11. (withdrawn) A method in accordance with Claim 1 wherein injecting material into a mold in an injection molding process to form a cushion first layer further comprises injecting material into the mold to integrally form a valve stem with the first layer.

12. (currently amended) A method for fabricating a flexible cushion, said method comprising:

forming a plurality of hollow cells with an injection molding process;

coupling the plurality of cells to a flexible base such that the hollow cells are coupled to and extend outward from only one layer within the base and are adapted to be expanded outwardly towards each other as an operating pressure within the plurality of cells is increased;  
and

coupling a sealing layer to the flexible base such that the plurality of hollow cells are coupled together in flow communication with each other via a plurality of hollow channels and such ~~that a~~ that a plurality of fluid control devices defined by at least one of the base and the sealing layer extend between adjacent hollow cells, wherein the plurality of hollow channels are aligned substantially in the same plane.

13. (canceled)

14. (previously presented) A method in accordance with Claim 12 wherein coupling the sealing layer to the base such that a plurality of fluid control devices defined by at least one of the base and the sealing layer further comprises coupling the sealing layer to the base such that the plurality of fluid control devices are coupled together in flow communication.

15. (previously presented) A method in accordance with Claim 12 further comprising coupling an inflation stem to the plurality of fluid control devices to enable the fluid control devices to selectively control flow communication independently to each of the plurality of hollow cells.

16. (previously presented) A method in accordance with Claim 12 further comprising coupling an inflation stem to the plurality of fluid control devices to enable an operating pressure within the plurality of fluid control devices to be changed to facilitate increasing a stability to a user seated on said cellular cushion.

17. (withdrawn) A method in accordance with Claim 13 further comprising coupling an inflation stem to the plurality of fluid control devices to enable an operating pressure within the plurality of fluid control devices to be changed to facilitate reducing sitting fatigue of a user seated on said cellular cushion.

18. (previously presented) A method in accordance with Claim 12 wherein coupling a sealing layer to the flexible base further comprises coupling the sealing layer to the base such that the plurality of fluid control devices defined between the base and the sealing layer facilitate selectively controlling flow communication independently to each of the plurality of hollow cells.

19. (original) A method in accordance with Claim 12 wherein coupling a sealing layer to the flexible base further comprises coupling the sealing layer to the base such that the plurality of hollow cells each extend through a respective opening formed within the sealing layer.

20. (original) A method in accordance with Claim 12 wherein coupling a sealing layer to the flexible base further comprises coupling the sealing layer to the flexible base using at least one of an RE welding process, a lamination process, a silk screening process, an adhesive process, and a printing process.

21. (original) A method in accordance with Claim 12 further comprising coupling an inflation stem in flow communication to the plurality of hollow cells for changing an operating pressure within the plurality of hollow cells.

22. (original) A method in accordance with Claim 12 wherein forming a plurality of hollow cells with an injection molding process further comprises forming the plurality of hollow cells such that each cell is defined by a sidewall having a substantially constant thickness across the base.

23. (withdrawn) A method in accordance with Claim 12 further comprising forming a valve stem integrally with at least one hollow cell.

24. (currently amended) A method for fabricating an inflatable cushion, said method comprising;

forming a flexible base using an injection molding process such that a plurality of hollow cells formed integrally with the base each extend outwardly from a root defined at the base to a tip and such that the plurality of cells are coupled together in flow communication via a plurality of channels aligned substantially within the same plane; and

coupling a second layer to the base such that a plurality of fluid control devices defined by at least one of the base and the second layer are each positioned between adjacent hollow cells to selectively control flow communication independently to each of the plurality of hollow cells extending outward only from the base.

25. (withdrawn) A method in accordance with Claim 24 further comprising coupling an inflation stem in flow communication to the plurality of hollow cells to enable the plurality of hollow cells to be pressurized.

26. (withdrawn) A method in accordance with Claim 25 further comprising coupling an inflation stem in flow communication to the plurality of fluid control devices to enable the plurality of fluid control devices to control flow communication independently to each of the plurality of hollow cells within the cushion.

27. (original) A method in accordance with Claim 26 wherein coupling a sealing layer to the base further comprises coupling the second layer to the base such that the plurality of hollow cells are coupled together in flow communication by a plurality of passageways defined by at least one of the base and the second layer.

28. (original) A method in accordance with Claim 27 wherein coupling the second layer to the base such that the plurality of hollow cells are coupled together in flow

communication by a plurality of passageways defined by at least one of the base and the second layer further comprises coupling the second layer to the base such that a release agent is contained within each of the plurality of passageways.

29. (original) A method in accordance with Claim 24 further comprising coupling an outer layer to at least one of the base and the second layer.

30. (original) A method in accordance with Claim 29 wherein coupling a third layer to at least one of the base and the second layer further comprises coupling the third layer to at least one of the base and the second layer such that the second layer is between the base and the third layer.

31. (original) A method in accordance with Claim 29 wherein coupling a third layer to at least one of the base and the second layer further comprises coupling the third layer to at least one of the base and the second layer such that the base is between the second and third layers.

32. (original) A method in accordance with Claim 29 further comprising increasing an operating pressure within the plurality of fluid control devices to facilitate increasing the stability of the cushion to a seated user.

33. (original) A method in accordance with Claim 29 further comprising increasing an operating pressure within the plurality of fluid control devices to facilitate reducing sitting fatigue of a seated user.